including a storage part for copying the music piece data and the management data which have been stored in the music piece data managing apparatus and storing them, a transfer data reading part for reading the reproducing order data transferred by the data transfer media, and a reproduction control part for collating the reproducing order data read by the transfer data reading part with the management data stored in the storage part and controlling reproduction of the music piece data stored in the storage part based on the order of reproduction designated by the reproducing order data.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a structural diagram showing a concept of an in-vehicle audio information reproduction control system according to the invention;

Fig. 2 is a block diagram showing the construction of a music piece data managing apparatus in the system of Fig. 1;

Fig. 3 is a block diagram showing the construction of an in-vehicle audio information reproducing apparatus in the system of Fig. 1;

Fig. 4 is a diagram showing the format of data which is stored onto a hard disk of each apparatus in the system of Fig. 1;

Fig. 5 is a structural diagram of the format of reproducing order data, showing an example of the edition of the reproduction order of music pieces in the music

piece data managing apparatus of Fig. 2;

Fig. 6 is a diagram showing the format of reproducing order data showing an example of the edition (example of edition in terms of artist or genre) of the reproducing order of music pieces in the music piece data managing apparatus of Fig. 2;

Fig. 7 is a diagram showing the data format in a memory when transferring additional data together with the reproducing order data to the in-vehicle audio information reproducing apparatus in the system of Fig. 1;

Fig. 8 is a flowchart showing an overall operation of the edition of the reproduction order of the music pieces in the music piece data managing apparatus of Fig. 2; and

Fig. 9 is a flowchart showing a reproduction control process of the music pieces in the in-vehicle audio information reproducing apparatus of Fig. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Fig. 1 is a structural diagram showing the concept of an in-vehicle audio information reproduction control system according to the invention.

In Fig. 1, a music piece data managing apparatus 10 is constituted mainly by a personal computer and that may be installed at an indoor place such as an office or the like. The music piece data managing apparatus 10 has a function of obtaining music piece data and data associated therewith from a music piece recording disc or a server connected to a network, storing the data on an internal hard disk, and

editing the order of reproduction of the music piece data.

An in-vehicle audio information reproducing apparatus 20 is generally installed in a vehicle and has a function for reproducing the music piece data stored on a built-in hard disk. The hard disk is detachable from a main unit of the in-vehicle audio information reproducing apparatus 20. By connecting the hard disk to the hard disk of the music piece data managing apparatus 10, the data stored on the hard disk of the music piece data managing apparatus 10 can be copied.

A memory 30 is a portable data transfer media such as Memory Stick or the like. By loading the memory into the music piece data managing apparatus 10, the reproducing order data to instruct the order of reproduction of the music piece data edited by the apparatus 10 can be recorded into the memory 30. By removing the memory 30 from the music piece data managing apparatus 10 and loading it into the in-vehicle audio information reproducing apparatus 20, the data recorded in the memory 30 can be transferred to the in-vehicle audio information reproducing apparatus 20.

The structure of the music piece data managing apparatus 10 will now be described with reference to a structural diagram shown in Fig. 2.

In the music piece data managing apparatus 10, a control part 11 is constituted mainly by a microcomputer and has a function for controlling the operation of the apparatus as a whole.